## PCT

## WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6: (11) International Publication Number: WO 99/53960 **A3** C12N 15/36, 15/49, A61K 48/00 (43) International Publication Date: 28 October 1999 (28.10.99)

22 April 1998 (22.04.98)

(21) International Application Number: PCT/US99/08802 (81) Designated States: CA, JP, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, (22) International Filing Date: 22 April 1999 (22,04,99) PT, SE).

US

(63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Application US

60/082,600 (CIP) Filed on 22 April 1998 (22,04,98)

(71) Applicant (for all designated States except US): CHIRON CORPORATION [US/US]; Intellectual Property - R440, P.O. Box 8097, Emeryville, CA 94622-8097 (US).

(72) Inventor; and (75) Inventor/Applicant (for US only): PALIARD, Xavier [US/US]; Chiron Corporation, P.O. Box 8097, Emeryville,

CA 94622-8097 (US). (74) Agents: HARBIN, Alisa, A. et al.; Chiron Corporation, Intellectual Property - R440, P.O. Box 8097, Emeryville, to CA 49662-8097 (US).

Published With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(88) Date of publication of the international search report: 23 December 1999 (23,12,99)

(54) Title: ENHANCING IMMUNE RESPONSES TO GENETIC IMMUNIZATION BY USING A CHEMOKINE

(57) Abstract

(30) Priority Data:

60/082,600

The immune response to a DNA immunogen in a mammal can be enhanced by administration of a chemokine or a polynucleotide encoding the chemokine. This method can be used, for example, to immunize or vaccinate a mammal against an infectious disease or a